	Application No.	Applicant(s)
Notice of Allowability	10/717,145	O'BRIEN, STEPHEN
	Examiner	Art Unit
	Doug Hutton	2176

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *Applicant's Response dated 11/20/2006*.

2. ☒ The allowed claim(s) is/are *1-3,5,6,8,9,11-17,22,23,25,26 and 28-34*.

3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All   b) ☐ Some*   c) ☐ None of the:

      1. ☒ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application

6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____.

Applicant's Response

In Applicant's Response dated 11/20/2006, Applicant filed a Request for

Continued Examination, amended Claims 1, 11 and 23, added new Claims 29-34,

cancelled Claim 24, and argued against all rejections previously set forth in the Office

Action dated 07/27/2006.

Based on the amendments, Applicant's remarks and the following Examiner's

Amendment, all rejections previously set forth are withdrawn.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes

and/or additions be unacceptable to applicant, an amendment may be filed as provided

by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be

submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview

with Brian I. Marcus on 02/16/2007.

The application has been amended as follows:

In the Claims:

1. (currently amended) An iterative method of laying out elements in a defined space using content data and design data, said content data including alphanumeric and/or graphical elements[[,]] and said design data including rules associated with one or more particular alphanumeric elements and/or graphical elements, said rules defining a scoring system which defines a score dependent on a degree of conformance to said rules, at least some of the rules being associated with a priority representing ~~an~~ ~~arrangement~~ a positional requirement of the one or more particular alphanumeric elements and/or graphical elements, the method comprising~~, in a processing system,~~ the steps of:

   a) arranging geometrically the alphanumeric and/or graphical elements included in the content data, the arrangement being performed within the defined space so as to obtain a resulting layout;

   b) scoring the resulting layout according to the rules included in the design data, wherein the score of the resulting layout is weighted according to the priority associated with the at least some of the rules;

   c) storing said score;

d) repeating the above steps (a) to (c) to determine <u>scores for</u> a number of different resulting layouts~~, thereby allowing~~ <u>and selecting</u> one of the resulting layouts ~~to be selected in accordance with~~ <u>based upon</u> the score<u>s</u>; and

e) displaying [[a]]<u>the</u> selected resulting layout.

2. (previously presented) A method according to claim 1, wherein the defined space is a page of a book.

3. (currently amended) A method according toe claim 1, wherein the defined space is ~~to be~~ displayed on a screen.

4. (cancelled)

5. (currently amended) A method according to claim 1, wherein the method includes repeating steps (a) through (e) for a plurality of different <u>defined</u> spaces ~~and different elements~~, thereby obtaining a plurality of selected resulting layouts which define a finished work.

6. (currently amended) A method according to claim 1, ~~said~~<u>wherein</u> step (b) ~~of scoring including the step of~~<u>includes</u> scoring a high value for an<u>y of</u> the particular alphanumeric[[al]] element and/or graphical element ~~that has~~<u>having</u> an optimal relative position in the <u>defined</u> space[[,]] and ~~the step of~~scoring a low value for an<u>y of the</u>

particular alphanumeric[[al]] element and/or graphical element ~~that has~~ having a[[n]] poor relative position in the defined space~~, the rules determining the optimal and poor position in the space~~.

7. (cancelled)

8. (currently amended) A method according to claim 23, wherein the defined space is a page of a book.

9. (currently amended) A method according to claim 23, wherein the defined space is a frame ~~to be~~ displayed on a screen.

10. (cancelled)

11. (currently amended) A processing system for laying out elements in a defined space, the processing system comprising:

   a) [[A]]a store for storing:

      i.   content data including alphanumeric and/or graphical elements, and

      ii.   design data including rules associated with one or more particular

         alphanumeric elements and/or graphical elements, said rules defining a

         scoring system which defines a score dependent on a degree of conformance

         to said rules, at least some of the rules being associated with a priority

representing ~~an arrangement~~ a positional requirement of the one or more

particular alphanumeric elements and/or graphical elements;

b) a processor adapted to:

i.   arrange geometrically the alphanumeric and/or graphical elements included in

the content data to generate a layout, the arrangement being performed

within the defined space so as to obtain a resulting layout;

ii.   score the resulting layout according to the rules included in the design data,

wherein the score of the resulting layout is weighted according to the priority

associated with the at least some of the rules;

iii. store said score;

iv.   repeat the above steps (b)(i) to (b)(iii) to determine scores for a number of

different resulting layouts~~, thereby allowing~~ and select one of the resulting

layouts ~~to be selected in accordance with~~ based upon the scores; and

v.   display [[a]]the selected resulting layout.

12. (currently amended) The processing system according to claim 11, wherein the

processing system ~~including~~ includes a display for presenting layouts to [[the]]a user.

13. (currently amended) The processing system according to claim 12, the processing

system being adapted to:

a) select [[a]]one of the resulting layouts; and[[,]]

b) generate output data representing the selected resulting layout.

14. (currently amended) The processing system according to claim 13, the processing

system being adapted to select the resulting layout in accordance with based upon at

least one of:

   a) input commands received from [[a]]the user; and[[,]]

   b) the scores of the resulting layouts.

15. (currently amended) The processing system according to claim 13 or claim 14, the

processing system being coupled to a communications network, the processing system

being adapted to:

   a) receive the content and/or design[[s]] data from one or more end stations

      coupled to the communications network; and[[,]]

   b) store the received content and/or design[[s]] data in the store.

16. (currently amended) The processing system according to claim [[15]]13, the

processing system being adapted to transfer the output data to a selected end station.

17. (currently amended) The processing system according to any one of the claims 11

to 16claim 11, the processing system being adapted to determine the content and/or

design[[s]] data inserted into the resulting layouts in accordance with based upon input

commands received from a user

18. (cancelled)

19. (cancelled)

20. (cancelled)

21. (cancelled)

22. (previously presented) A method according to claim 1, wherein arranging

geometrically the alphanumeric and/or graphical elements comprises at least one of:

    a) positioning the alphanumeric and/or graphical elements within the defined space;

       and

    b) resizing the alphanumeric and/or graphical elements.

23. (currently amended) A method of laying out one or more elements in a defined

space, the method comprising, in a processing system, the steps of:

    a) arranging the one or more elements in the defined space according to a first set

       of rules, the first set of rules relating to a desired arrangement of the one or more

       elements in the defined space, the first set of rules defining a predetermined

       number of resulting layouts for a given number of elements; specifying which of

       the one or more elements will be inserted into the defined space and totaling the

       number of specified elements;

    b) for at least some of the resulting layouts, determining a score for the

       arrangement of the elements using a second set of rules, the second set of rules

~~defining a scoring system for determining the score based on the arrangement of the one or more elements within the defined space; thereby allowing one of the resulting layouts to be selected in accordance with the score; and~~collecting all rules associated with the specified elements and totaling the number of the collected rules, wherein the collected rules define desired arrangements of the specified elements in the defined space;

c) ~~displaying the selected resulting layout.~~determining all possible resulting layouts of the specified elements within the defined space, wherein the determination is based upon the number of specified elements and the number of collected rules;

d) arranging the specified elements in the defined space according to the collected rules, thereby obtaining one of the resulting layouts;

e) determining a score for the obtained resulting layout based upon a scoring methodology associated with the collected rules, wherein the score is based on the arrangement of the specified elements within the defined space;

f) repeating the above steps (d) and (e) to arrange the specified elements in each of the possible resulting layouts and to determine a score for each obtained resulting layout;

g) selecting one of the resulting layouts based upon the scores; and

h) displaying the selected resulting layout.

24. (cancelled)

25. (currently amended) A method according to claim 23, wherein arranging ~~geometrically~~ the elements comprises at least one of:

    a) positioning the elements within the defined space; and

    b) resizing the elements.

26. (currently amended) A processing system for laying out one or more elements in a defined space, the processing system being configured to:

    a) ~~arrange the one or more elements in the defined space according to a first set of rules, the first set of rules relating to a desired arrangement of the one or more elements in the defined space, the first set of rules also defining a predetermined number of resulting layouts in accordance with a given number of elements;~~specify which of the one or more elements will be inserted into the defined space and total the number of specified elements;

    b) ~~for at least some of the resulting layouts, determine a score for the arrangement of the elements using a second set of rules, the second set of rules defining a scoring system for determining the score based on the arrangement of the one or more elements within the defined space, thereby allowing one of the resulting layouts to be selected in accordance with the score; and~~collect all rules associated with the specified elements and total the number of the collected rules, wherein the collected rules define desired arrangements of the specified elements in the defined space;

c) ~~display the selected resulting layout.~~determine all possible resulting layouts of

the specified elements within the defined space, wherein the determination is

based upon the number of specified elements and the number of collected rules;

d) arrange the specified elements in the defined space according to the collected

rules, thereby obtaining one of the resulting layouts;

e) determine a score for the obtained resulting layout based upon a scoring

methodology associated with the collected rules, wherein the score is based on

the arrangement of the specified elements within the defined space;

f) repeat the above steps (d) and (e) to arrange the specified elements in each of

the possible resulting layouts and to determine a score for each obtained

resulting layout;

g) select one of the resulting layouts based upon the scores; and

h) display the selected resulting layout.

27. (cancelled)

28. (currently amended) A processing system according to claim 26, wherein the

processing system is configured to arrange the ~~one or more~~ specified elements by

performing at least one of:

a) positioning the specified elements within the defined space; and

b) resizing the specified elements.

29. (currently amended) The method according to claim 1, wherein one of the rules is

a positional rule that defines a desired distance between at least one of:

    a) two of the elements; and

    b) one of the elements and an edge of the defined space;

wherein the ~~method includes~~ scoring for each ~~the~~ resulting layout ~~according to~~ is based

upon a conformance of the ~~each~~ resulting layout with the desired distance of the

positional rule.

30. (currently amended) The method according to claim 29, wherein the positional rule

is one of the at least some of the rules, and wherein the method includes weighting the

score of ~~the~~ each resulting layout ~~according to the~~ in accordance with an associated

priority of the positional rule.

31. (currently amended) The method according to claim 29, wherein the method

includes ~~the~~ having a user ~~defining~~ define the desired distance for the positional rule.

32. (currently amended) The method according to claim 1, wherein the alphanumeric

and/or graphical elements include a first and second element having a spatial

dependency defined therebetween, and wherein the method includes arranging the first

element within the defined space, thereby causing an automatic arrangement of the

second element within the defined space in accordance with the spatial dependency.

33. (currently amended) The method according to claim 1, wherein the method

includes ~~the~~ having a user ~~defining~~ define the priority associated with the at least some

of the rules.

34. (currently amended) The method according to claim 23, wherein the ~~first set of~~

totaled number of collected rules ~~including~~ is n_1 ~~rules and wherein there are~~ the totaled

number of specified elements is m and ~~elements to be arranged in the defined space,~~

~~wherein~~ the ~~predetermined~~ number of possible resulting layouts is n^m.

Allowable Subject Matter

Claims 1-3, 5, 6, 8, 9, 11-17, 22, 23, 25, 26 and 28-34 are allowed.

The following is an examiner's statement of reasons for allowance:

Claims 1 and 11:

The prior art fails to disclose or suggest an iterative method/system for arranging

content elements within a defined space to obtain multiple resulting layouts, scoring

each of the multiple resulting layouts according to rules associated with the content

elements, and choosing one of the resulting layouts based upon the scores, comprising

the combination of recited limitations in the claims.

Claims 2, 3, 5, 6, 12-17, 22 and 29-33:

These claims are dependent upon Claims 1 or 11, and are thus allowable.

Claims 23 and 26:

The prior art fails to disclose or suggest a method/system for arranging specified elements in a defined space by determining all possible resulting layouts of the specified elements within the defined space based upon the number of specified elements and the number of arrangement rules associated with the specified elements, scoring each of the possible resulting layouts based upon a scoring methodology associated with the rules, and selecting one of the possible resulting layouts based upon the scores, comprising the combination of recited limitations in the claims.

Claims 8, 9, 25, 28 and 34:

These claims are dependent upon Claims 23 or 26, and are thus allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Doug Hutton whose telephone number is 571-272-4137. The examiner can normally be reached on Monday-Friday from 8:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Herndon, can be reached at (571) 272-4136. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2100.

WDH
February 19, 2007

Doug Hutton
Primary Examiner
Technology Center 2100